

CLAIMS

What is claimed is:

1. A miter saw comprising:

a base assembly;

a rotatable table rotatably connected to the base assembly, the table having a plane;

a saw assembly including a motor and a blade driven by the motor; and

10 a pivot arm pivotally attached to the table and supporting the saw assembly, allowing a user to plunge the blade below the table plane;

wherein area of the blade below the table plane when plunged is between about 14.4% and 50% of total blade area.

15 2. The miter saw of Claim 1, wherein the blade area below the table plane is about 15.75% of the total blade area.

3. The miter saw of Claim 1, further comprising a sliding fence connected to the base assembly.

4. A miter saw comprising:

a base assembly;

20 a rotatable table rotatably connected to the base assembly, the table having a table plane;

a fence connected to the base assembly and having a fence plane;

a saw assembly including a motor and a blade driven by the motor, the blade having a radius and a blade center; and

a pivot arm pivotally attached to the table and pivotally supporting the saw assembly about a first axis substantially parallel to the table plane, allowing a user to plunge the blade below the table plane;

wherein distance between the first axis and the table plane is about 0.472 times the radius, distance between the first axis and the fence plane is about 1.45 times the radius, and distance between the first axis and the blade center is about 1.882 times the radius.

5. The saw of Claim 4, wherein distance between the blade center and the table plane is about 0.57 times the radius when the blade is plunged below the table plane.

6. The saw of Claim 4, wherein chord length of blade periphery plunged below the table plane is at least 1.6 times the radius.

7. The saw of Claim 4, wherein chord of blade periphery plunged below the table plane has a first endpoint behind the fence and a second endpoint in front of the fence, and distance between the fence and the second endpoint is at least 1.1 times the radius.

8. The saw of Claim 7, wherein the distance between the fence and the second endpoint is at least about 1.236 to about 1.252 times the radius.

9. The saw of Claim 7, wherein the distance between the fence and the second endpoint is at least 1.244 times the radius.

10. The saw of Claim 7, wherein the distance between the fence and the second endpoint is between about 0.60 and 0.775 times the chord length.

11. The saw of Claim 7, wherein the distance between the fence and the second endpoint is about 0.757 times the chord length.

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